

REMARKS

Status

Claims 52-76 are the pending claims in the application. In the last amendment submitted by the Applicant, Applicant elected claims 64-76 for continued prosecution. Claims 52-63 have been included and amended for possible rejoinder. The present amendment does not cancel or add any claims. Accordingly, it is claims 52-76, as now amended, which are at issue.

The Rejection

Claims 64-76 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. In particular, the claims are rendered indefinite by the two different thickness ranges of layers claimed. In addition, claim 76 was held unclear if the three types of gas in parentheses constituted a limitation. Claims 75 and 76 stand rejected under 35 U.S.C. §101 because “use” claims are not a statutory category of invention. And finally, claims 64-76 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent Application Publication 2004/0238443 by Gohrt et al. or German Patent Application Publication DE 19701045 by Gorak et al. in view of EPO Publication 466,954 by Smith.

Remarks Directed to the Rejection of Claims 64-76 under 35 U.S.C. §112, Second Paragraph

Liquid or gas can be treated in the device, but liquid and gas are not treated at the same time. Thus while treating liquid, no gas is directed through the device at the same time and vice versa. Independent claim 64 has been amended to reflect this fact, with support for the amendment drawn from the specification (for example see page 7, line 1 of WO document). In addition, the thickness range of the at least one convective layer has been amended to be between

0.1 millimeters and 5 centimeters, thereby removing any uncertainty regarding the change of thickness for the convective layer. As such, Applicant requests that the rejection of claims 64-76 under 35 U.S.C. §112, second paragraph, be withdrawn.

Regarding claim 76 and the question of whether or not the three types of gas in parentheses constitute a limitation, this text has been deleted from the claim.

Claim 64 has also been amended such that at least one substance is to be removed from the treated liquid or gas. Whether the liquid or gas is enriched by another substance is optional with the basis for removing a substance from the treated liquid or gas having support throughout the specification and Figures 1a, 1b and 1c. Independent claim 64 has also been amended such that the orientation of the device is positioned such that the at least one convective layer is horizontal or at an angle between horizontal and 45° inclined from horizontal. This position of the device makes sedimentation of substances possible.

Given the above remarks, Applicant requests that the rejection of claims 64-76 under 35 U.S.C. §112, second paragraph, be withdrawn and the claims moved towards allowance.

Remarks Directed to the Rejection of Claims 75 and 76 under 35 U.S.C. §101

Claims 75 and 76 have been amended such that they are now method claims. As such, Applicant requests that the rejection of these claims under 35 U.S.C. §101 be withdrawn.

Remarks Directed to the Rejection of Claims 64-76 under 35 U.S.C. §103(a)

The Examiner has rejected claims 64-76 under 35 U.S.C. §103(a) as being unpatentable over one of US 2004/0238443 by Gohrt et al. or DE 19701045 by Gorak et al. in view of EP 466,954 by Smith.

Applicant submits that Gohrt et al. describes structured multi-purpose packings and their use in physical material separation processes, the packings containing material separation

elements and second functionality elements provided in alternate layers. The structure of the packings makes it possible to perform two or more different processes in a single process unit (paragraph [0003], first sentence) with a down-flowing liquid and rising gas in the interior of the column (paragraph [0017]). In contrast, amended claim 64 is distinguished from the column or packings described by Gohrt et al. since Gohrt et al. describes a simultaneous flow of liquid and gas in the column and an overall vertical flow of the liquid and gas. Amended claim 64 describes treatment of liquid or gas, not liquid and gas at the same time. Furthermore, the filter described in claim 64 does not have a vertical flow of the liquid or gas.

Gorak et al. describes packings and columns similar to Gohrt et al., the difference being the material used for the separation elements and second functionality elements. Thus, the function and flow directions are similar in the two documents. Thus, the instant invention as described in amended claim 64 is different from the columns described by Gorak et al. for the same reasons as described above with respect to Gohrt et al.

Smith describes material for a reaction-distillation column, where the material comprises a plurality of closed cloth pockets supported by wire mesh and arranged by coiling the material into a spiral. Smith does not describe that only liquid or gas is to be treated in the column and the document does not describe the thickness of the convective layers in respect of liquid or gas.

As such, Applicant respectfully submits the combination of Gohrt et al. with Gorak et al. and/or Smith does not teach, suggest or make obvious the invention as claimed in currently amended claim 64. As such, Applicant respectfully requests that the rejection of claims 64-76 under 35 U.S.C. §103(a) be withdrawn and the claims moved towards allowance.

Conclusion

In view of the amendments and remarks presented herein, Applicant respectfully submits that claims 64-76 are now in condition for allowance. In addition, Applicant requests that the Examiner consider rejoining claims 52-63 as currently amended to the application. Any questions, comments or suggestions the Examiner may have which would place the application in still better condition for allowance should be directed to the undersigned attorney.

The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 07-1180.

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Respectfully submitted,

Electronic Signature: /Mark A. Harper, Ph.D./
Mark A. Harper, Ph.D.

Registration No.: 60,248
GIFFORD, KRASS, SPRINKLE, ANDERSON
& CITKOWSKI, P.C.
2701 Troy Center Drive, Suite 330
Post Office Box 7021
Troy, Michigan 48007-7021
(248) 647-6000
(248) 647-5210 (Fax)
Attorney for Applicant